

Navy 44 STC Electrical Safety

1 General Electrical Safety

- Direct Current (DC) can be dangerous. Shocks and burns from the 12 V DC system are possible.
- Alternating Current (AC) can be *deadly!* The 120 V AC system can cause enough alternating current in the human body that could cause cardiac arrest.

2 AC System Safety and Use

- *Never* walk with an energized shore power cable!
 - when disconnecting the vessel from shore power, disconnect the shore end *first*
 - when connecting the vessel to shore power, connect the shore end *last*
- After connecting shore power, check the polarity on the AC main breaker.
- The AC outlet at the navigation station is energized only when the vessel is connected to shore power.

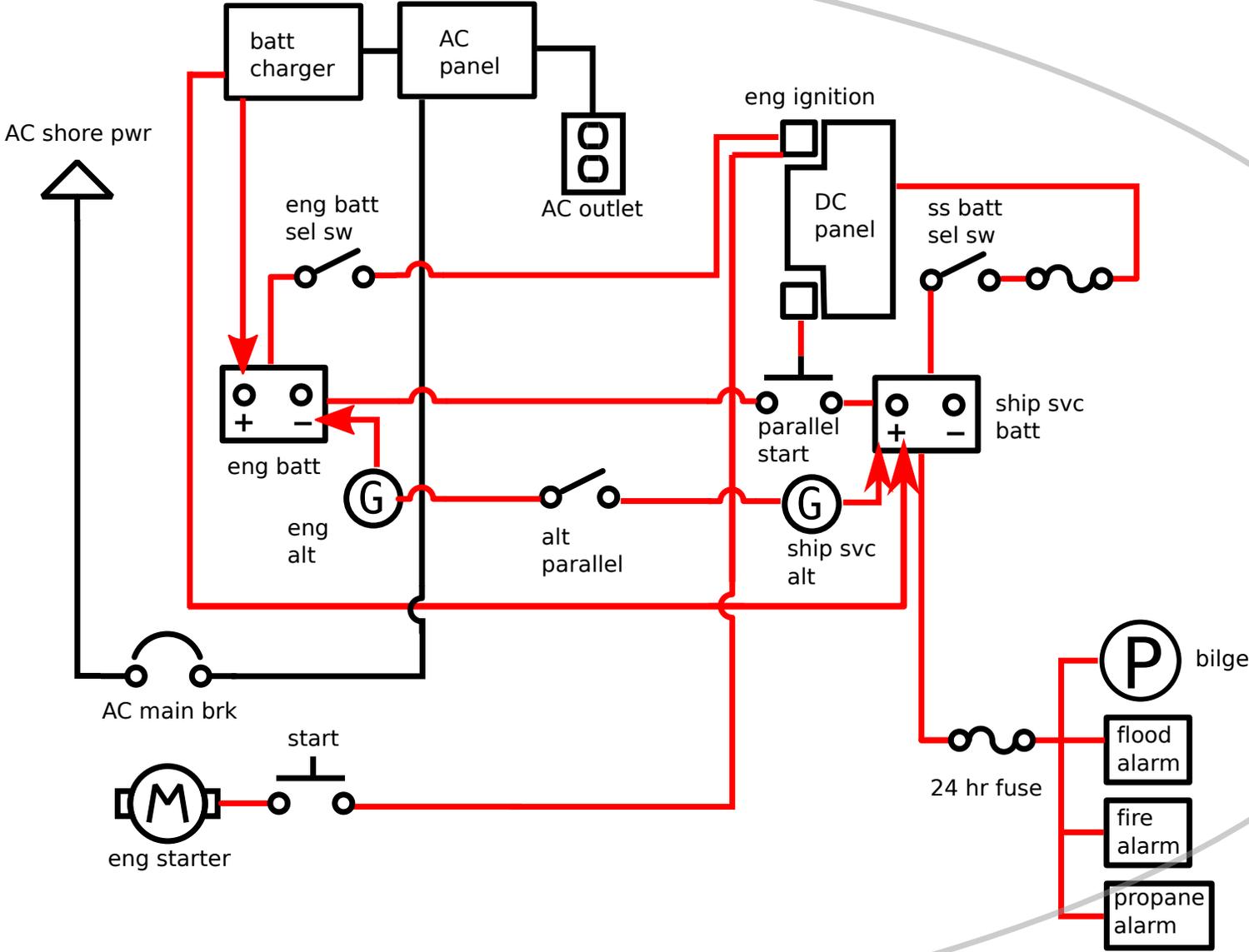
3 DC System Safety and Use

- Underway, vessel uses DC system powered by batteries only.
- Monitor state of charge of each battery bank: engine and ship service.
 - When either bank ≤ 12.2 V (approx. 50% state of charge), recharge batteries using engine underway or battery charger when connected to shore power.
 - While charging, proper indication is ≥ 13.1 V on each bank.
- When underway on battery power, conserve electricity! Devices that draw high current include:
 - refrigerator
 - radar
 - MF/HF radio when continuously *transmitting*
 - cabin lights and fans

4 Circuit Breaker Safety

- Circuit breakers are designed to open automatically (break the circuit) when they detect too much electrical current in a circuit.
- Circuit breakers are also used as centrally located on/off switches for boat equipment.
- If a circuit breaker trips (opens by itself), perform these actions:
 - first, check for area of the affected equipment for a burning smell, or for equipment that is hot
 - next, reset the circuit breaker (*only once*) and check for normal equipment operations
 - if the breaker trips a second time, leave it open, and tag out the breaker with duct tape

Navy 44 STC Electrical System



— AC system
— DC system